REMARKS

In the Advisory Action, the Examiner asserted that the Tan reference taught integration of the claimed circuitry on a "single monolithic substrate" in the manner claimed by Applicants. In support of this position, the Examiner pointed to a) Tan, page 200, second paragraph, and b) Tan Figure 7.

Tan page 200 (second paragraph) refers to Tan Figure 1 which is a "block diagram of the QAM receiver including an RF front end." Tan Figure 1 is reproduced below:

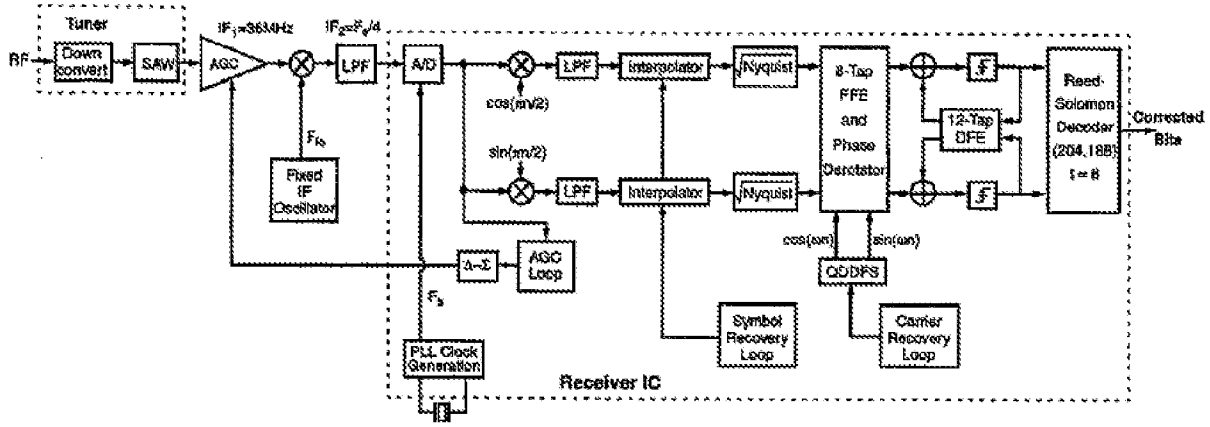


Figure 1: Top level architecture of integrated QAM receiver.

Applicants would direct the Examiner's attention to the large dotted box in Figure 1 and further to the reference, on the bottom edge thereof, to a "Receiver IC." It is clear that the large dotted box identifies which components are contained within, and which functions are performed by, the "Receiver IC." Notably, the RF-to-IF tuning and downconversion functionality is NOT contained within the dotted box (see that the input to the dotted box is an intermediate frequency IF signal), and thus Tan teaches that the RF tuning and downconversion functionality is ***not*** on the "Receiver IC."

The reference by Tan in the second paragraph of page 200 to a "block diagram of the QAM receiver including an RF front end" is accordingly a reference to a QAM receiver (the "Receiver IC") and a separate RF front end circuit (the RF tuning and downconversion functionality) which is connected to that QAM receiver.

Tan page 200 (second paragraph) does not support the Examiner's position that Tan teaches a single monolithic substrate including an RF front end. Rather, Tan Figure 1, as described by Tan page 200 (second paragraph), teaches a "Receiver IC" that is separate from the RF front end circuitry. In fact, the Examiner will note a smaller dotted box in Tan Figure 1 around the "Tuner" circuitry. This would suggest the presence of a separate integrated circuit (i.e. the "Tuner" IC) and associated monolithic substrate for the RF tuner which help produce the IF signal input to the Rceiver IC.

Tan Figure 7 illustrates a QAM receiver chip micrograph. Figure 7 is reproduced below:

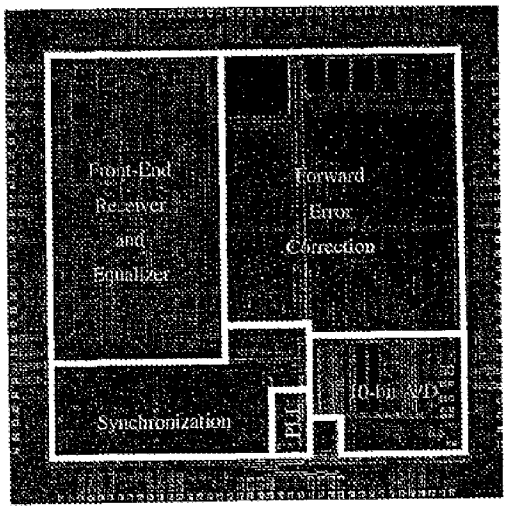


Figure 7: QAM receiver chip micrograph.

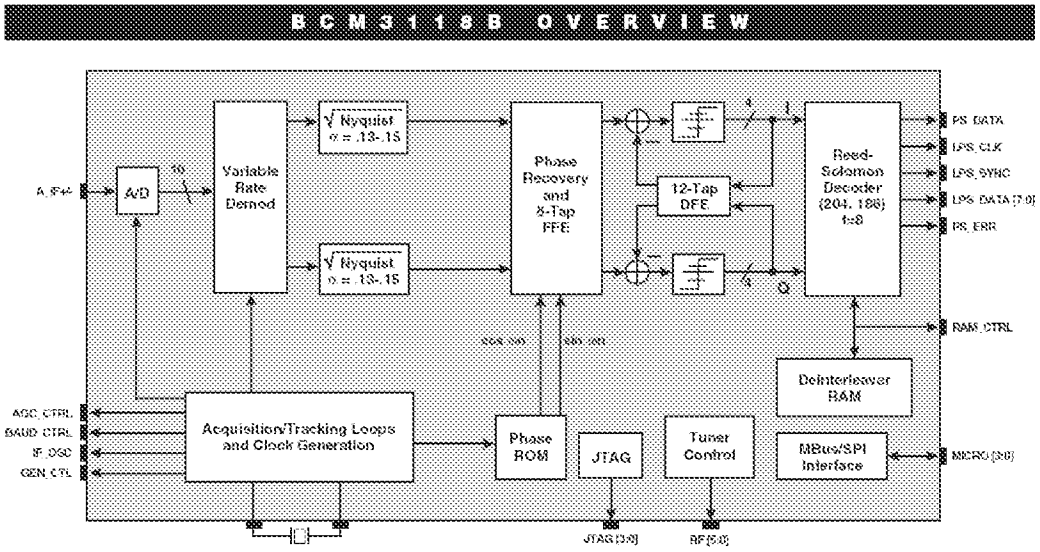
The Examiner apparently relies on the illustrated block of circuitry labeled "Front-End Receiver and Equalizer" as proof that ***all*** of the functional blocks shown in Tan Figure 1 have been integrated onto a single monolithic substrate. Applicants disagree.

It will be noted by the Examiner that the label in Figure 7 is "Front-End Receiver and Equalizer". The label does not mention an "***RF*** Front-End." The mentioning of a generic "Front-End" in Figure 7 is a reference to the front-end components within the large dotted box for the "Receiver IC" of Figure 1. Such front-end components would include, for example, digital mixing circuitry, baseband filtering, interpolating and Nyquist filtering functionality as shown in Tan Figure 1. This circuitry is the "front-end" circuitry of the Receiver IC providing receiving and equalizing functions.

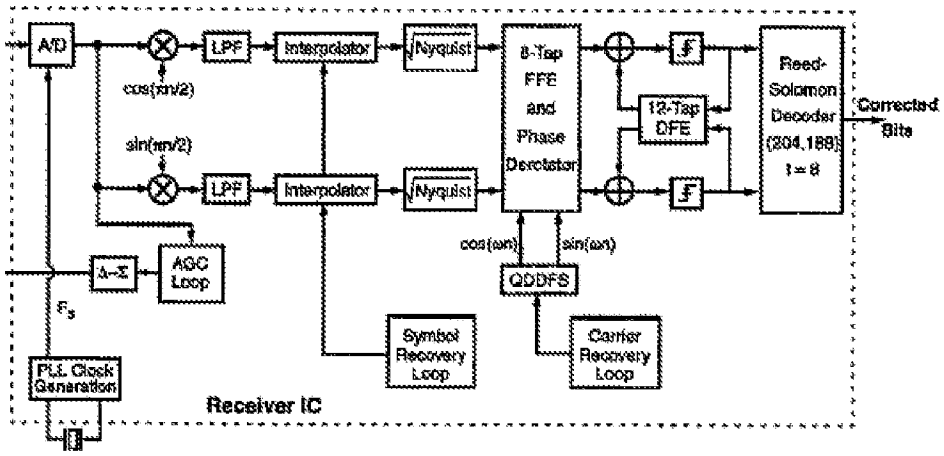
It is recognized that the Examiner may view the foregoing as simply Applicants' interpretation of Figure 7, and that this does not prove that the "Front-End Receiver and Equalizer" block in Figure 7 is different from the RF-to-IF front-end circuitry which produces the IF input to the Receiver IC of Figure 1. Thus, Applicants have conducted a further investigation of the Tan circuit in an effort to prove, through other evidence, that the RF-to-IF circuitry of Tan Figure 1 is not fabricated on the same, single monolithic substrate as the digital baseband "Receiver IC" circuitry.

The Examiner's attention is directed to the top of the left column on page 200 of the Tan reference where mention is made to "Broadcom Corporation." It is believed by Applicants that the authors of the Tan reference are associated with Broadcom, and further that the circuitry of Figure 1 has some relationship to Broadcom products. Applicants were not able to identify a Broadcom product which exactly matched the circuitry of Figure 1 and the functionality

described in the Tan reference, but the Examiner is requested to review the following information concerning the Broadcom product BCM3118B which is a "Qamlink DVB/DAVIC Receiver" integrated circuit that is quite close to the circuitry shown by the Tan reference. The functional block diagram of this BCM3118B circuit, taken from the Broadcom datasheet, is reproduced below:



The Examiner will note the structural similarities between the BCM3118B block diagram and the "Receiver IC" (within the large dotted box) of Tan Figure 1:



In particular, note that the chip perimeter outline in the BCM3118B block diagram matches the large dotted box outline in Tan Figure 1. Note the same off-chip placement of the crystal for the clock oscillator circuitry. Note also the same automatic gain control output port for controlling off-chip circuitry associated with the RF front-end. Still further note the same input port for the chip to receive a downconverted IF signal.

Applicants respectfully submit that the foregoing proves that the Tan reference, which is authored by persons with Broadcom and which concerns a Broadcom product design, shows a Receiver IC on a monolithic substrate (defined by the larger dotted box) and a separate RF-to-IF front-end circuit which is NOT fabricated on the same substrate as the Receiver IC.

Withdrawal of the rejection is requested.

The Office is authorized to charge any additional claim fee necessary for entry of this response to deposit account 07-0153 (reference 361170-1028).

In view of the foregoing, Applicants respectfully submit that the application is in condition for favorable action and allowance.

Dated: October 27, 2008

Respectfully submitted,

By /Andre M. Szuwalski/
Andre M. Szuwalski
Registration No.: 35,701
Gardere Wynne Sewell LLP
3000 Thanksgiving Tower
1601 Elm Street
Dallas, Texas 75201
(214) 999-4795
Attorney For Applicants